



Stinkingwater Mountains Pilot Project To Focus On Restoration

After doing some work in the Pueblo Mountains, this is the Harney County Wildfire Collaborative's second major project.

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Photograph by Brianna Goehring

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The Stinkingwater Mountains rise up out of the Harney Basin between Buchanan and Drewsey and have unfortunately endured many wildfires over the years. High Desert Partnership's Harney County Wildfire Collaborative has chosen the Stinkingwater Mountains as the subject of a pilot project centering on restoration as the group looks to prevent another megafire in the area.

The latest megafire of note in the Stinkingwaters occurred in 2014. The Buzzard Complex burned almost 400,000 acres total and more than 100,000 acres in the Stinkingwater Mountains area. The Harney County Wildfire Collaborative's goal is to prevent such megafires from starting. This pilot project will examine ways to restore the degraded state of the Stinkingwater Mountains project area to make it more fire resistant and resilient.

The group's first pilot project took place in the Pueblo Mountains and included a wilderness study area. The collaborative looked at ways to protect the intact sagebrush steppe landscape by installing fuel breaks and how to eradicate invasive annual grasses. That project was in a remote location, about three hours from Burns, outside of Fields, and did not involve many private landowners.

In contrast, the Stinkingwater Mountains project area encompasses 312,000 acres much closer to the towns of Burns and Crane, and includes a mix of private land ownership and Bureau of Land Management acreage. It is the land south of Highway 20 and north of the Crane-Venator Road. Because the area has burned before, invasive annual grasses such as cheatgrass and medusahead have replaced the native annual bunch grasses. These invasive grasses are much more likely to burn in the event of a fire, and wildfires happen quite often according to Ben Cate, Ecological Coordinator for the High Desert Partnership. "It's an area that has frequent lightning strikes and so frequent fires," he said. "Storms come out of the basin bottom floor, and lightning hits this mountain range all the time."

Bruce Taylor, a High Desert Partnership board member and active volunteer with the wildfire collaborative, commented on what happens when multiple wildfires ravage an area. "It's set up for that cycle that feeds on itself where the more fires you have, the more it tends to knock out the native bunch grasses and the more annual grasses become dominant. Then it burns more frequently, and the sagebrush never gets a chance to re-establish. It ends up with that big monoculture of invasive annual grasses," he said.

Prioritizing high value areas

One of the main reasons the wildfire collaborative chose the Stinkingwaters as its next project was because of the matrix of land ownership. Bill Dragt, a Supervisory Natural Resource Specialist with the Three Rivers field office of the Bureau of Land Management, said of the 312,000 acres in the pilot project, about a third of those are privately owned. If the cooperative can get support from landowners to work on projects that eradicate invasive annual grasses or manage juniper encroachment, the project will be more effective overall. "Because

the ownership is so split up, if landowner A does something and landowner B does nothing, it can be a waste of landowner A's time and money," Dragt noted. "The more that can be coordinated across ownership, the more effective any sort of management is likely to be."

The project will involve spraying invasive annual grasses, reseeding with perennial bunchgrasses where necessary, juniper cutting, and creating fuel breaks to make it easier to fight fires that ignite. Breaking the landscape up into manageable chunks for fire prevention and suppression and juniper removal will also be part of the project.

To try and identify and prioritize areas within the project boundaries, the collaborative is working with Chris Dunn, a research associate with Oregon State University. He has developed a PODs (Potential Operation Delineation) model that breaks the landscape into smaller sections and gives it a ranking based on its value. "All sorts of things are considered in that ranking like wildlife habitat and infrastructure, which can include homes, cabins, powerlines, watersheds and water quality," Cate said. Those sections that rank highly are the most important to protect from fire. The model was originally developed for forested land but the cooperative is working with Dunn to adapt it to the rangeland landscape. Using this model could help the cooperative determine where to put fuel breaks so that they can be the most effective in protecting the most valuable land.

On the ground research



This summer, the collaborative is collecting data to help determine the amount of potential fuel in the Stinkingwaters. Dustin Johnson, a High Desert Partnership board member and Harney County Wildfire Collaborative member, is a principal investigator for the Stinkingwater Mountains project and led one of two work crews that worked to collect data samples from plots within the project area to provide the collaborative with more information on fuel conditions.

Johnson said the crew sampled around 120 different sites, which try to cover the gradient of conditions within the Stinkingwaters, from higher elevations to lower elevations. Sites include heavier fuels such as shrubs and junipers as well as sites with finer fuels such as invasive annual grasses and herbaceous plants. At each site, technicians measure the amount of fine fuels, the cover of those fuels, fuel continuity and shrub abundance. Biomass samples are collected, and photos are taken of each site, including 360-degree photos.

Pictured above: Ryan Robles and Chris Boyd who were part of the summer crew collecting data to help determine the amount of potential fire fuel in the Stinkingwater Mountains.

Once all the data has been collected, Johnson said, they will take it to fire operations managers, fuels managers and range specialists to help them figure out how the amount of fine fuels in the project area relates to fire risk.

Johnson also hopes to do some ignition testing in the future, which will help with mapping the fire risk probabilities based on fuels and fuels conditions in the Stinkingwater project area. All of this will hopefully lead to mapping the fire outcomes as well.

"We're hoping that the process that results from this data collection is exportable to address wildfire as an issue in other areas in the Northern Great Basin and maybe throughout the Great Basin in the sagebrush ecosystems," Johnson said.

Landowner involvement

The cooperative is currently working with a few landowners on the project, but they hope to work with more as the project progresses. "We do have several folks who are actively engaged that we have been working with, and we're hoping that we get success with a few people and that gradually more landowners will get involved," Cate said.

Dragt, who supervises allotments and weed spraying in the Stinkingwaters for the Bureau of Land Management, has had some success with treating juniper encroachment, spraying fuel breaks in medusahead dominated areas and monitoring permittees who are doing winter grazing of medusahead. He hopes the Stinkingwater Mountains project will bring the necessary stakeholders together so that more progress can be made. "I think it offers us a really good opportunity," he said. "Hopefully, people will be patient enough to keep working on it, and it will produce both improvements in the fire regime and values to private landowners." That value being reducing the risk of megafires by helping the Stinkingwater Mountains to be more fire resistant and resilient.

This article is provided by High Desert Partnership; a Harney County nonprofit convening and supporting six collaboratives including the Harney County Wildfire Collaborative.

